WHAT IS CLAIMED IS:

1. A motor comprising:

a rotor including a shaft and a magnet surrounding a portion of the shaft;

a stator surrounding the magnet of the rotor with a gap therebetween, and adapted to generate a magnetic field thereby causing the rotor to rotate around an axis of the shaft;

a rotor sleeve having a cylindrical portion and a flange provided at one end of the cylindrical portion, the rotor sleeve being provided between the magnet and the shaft so as to fixedly hold the magnet and the shaft together;

a boss having a circular shape with a center hole for allowing the shaft to rotatably pass therethrough, and being fixedly attached to the stator so as to oppose the flange of the rotor sleeve; and

a plurality of bearing balls rotatably disposed between the boss and flange of the rotor sleeve.

2. A motor according to Claim 1, wherein an inner surface of the boss is beveled to form a conical configuration with a diameter increasing from the center hole of the boss.

3. A motor according to Claim 1, further comprising a thrust spring adapted to press the one end of the shaft by way of a ball rotatably provided.

4. A motor according to Claim 1, wherein the rotor sleeve has a plurality of partitioning protrusions formed on the flange, the partitioning protrusions being adapted to prevent the bearing balls from coming in contact with one another and to allow the bearing balls to freely rotate.

5. A motor according to Claim 1, wherein the boss has a plurality of partitioning protrusions formed on an inner surface thereof, the partitioning protrusions being adapted to prevent the bearing balls from coming in contact with one another and to allow the bearing balls to freely rotate.

6. A motor according to Claim 1, wherein the other end of the shaft is rotatably

supported by a sleeve bearing.

7. A motor according to Claim 1, wherein the rotor sleeve is formed by resin-molding such that resin is filled between the magnet and the shaft and cured thereby fixedly holing the magnet and the shaft together.

8. A motor according to of Claim 1, wherein the shaft has a spiral ridge formed on a surface of an exposed portion thereof.

9. A motor according to Claim 8, wherein the spiral ridge is formed of resin.

10. A motor according to Claim 9, wherein the spiral ridge is resin-molded simultaneously when the rotor sleeve is formed such that resin is filled between the magnet and the shaft.

11. A motor according to Claim 1, wherein the boss is formed by resin-molding integrally with the stator.